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EXAMINER

JARRETT, SCOTT L

ART UNIT

PAPER NUMBER

3623

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/824,853

Applicant(s)

JACOBS ET AL.

Examiner

Scott L. Jarrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 and 8-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/7/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This **Final** Office Action is responsive to Applicant's amendment filed July 7, 2005. Applicant's amendment amended claims 2 and 8-12 and canceled claims 1 and 3-7. Currently claims 2 and 8-12 are pending.

Response to Amendment

2. Applicant's amendment filed on July 7, 2005 with respect to amended claims 2 and 8-12 necessitated new ground(s) of rejection.

Response to Arguments

3. Applicant's arguments with respect to claims 2 and 8-12 have been considered but are moot in view of the new ground(s) of rejection.

Examiner thanks applicant for bringing to his attention the unintentional indication on the Office Action Summary dated March 2, 2005 that the drawings filed July 16, 2001 were objected to. The drawings filed July 16, 2001 are accepted.

Information Disclosure Statement

4. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

The attempt to incorporate subject matter into this application by reference to Guy Druce, Level-1 Algorithm, V1.6, is improper (Specification; Page 4).

Appropriate correction required.

Examiner requests applicant provide a copy of above cited reference.

Title

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Assigning Customer Orders to Schedule Openings Utilizing Overlapping Time Windows.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 2 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Babayev et al., U.S. Patent No. 5,615,121.

Regarding Claim 2 Babayev et al. teach a system and method for scheduling (assigning) customer service requests (orders) to a plurality of service providers (technicians, personnel, etc.; Abstract) wherein the system schedules/assigns a service request for the customer's specified appointment window ("preferred time", interval) when it is determined, by checking available resource (shift, schedule, etc.) time slots (intervals, appointment, blocks, etc.) for overlaps between the customer's preferred time and available shift/schedule openings (service times, appointments, etc.; Abstract; Figures 1-2E), that a service time coincides (overlaps, matches, maps, etc.) with the customer's preferred time (Column 2, Lines 1-30; Column 4, Lines 29-50).

More specifically Babayev et al. teach a system and method for assigning an order (appointment, reservation, job, booking, etc.) to an opening ("service time", available/free time slot, appointment, reservation, time block, etc.; Figures 2A-2E) in a schedule (shift, route, calendar, etc.) after a customer has selected ("preferred time" requested, proposed, reserved, scheduled, etc.; Figure 1, Element 18; Figure 2A,

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Element 112) an appointment (window, time slot, time frame, opening, etc.) in the schedule comprising:

- generating (creating, determining, providing, etc.) available (schedulable, free, open, unscheduled, etc.) time blocks and resources (slots, appointments, reservations, etc.) for a shift/schedule in the opening ("scheduling period", time frame, window, schedule, etc.; Column 6, Lines 39-52; Column 7, Lines 62-68; Figures 2A-2E, Element 104);

- intersecting (matching, mapping, overlapping, aligning, etc.) the schedule/shift opening and the appointment time (window, block, slot, etc.) to determine a time range (i.e. determine a range of time in which the customer appointment and an available time slot in a shift schedule coincide; Column 1, Lines 44-47; Column 2, Lines 1-7; Column 4, Lines 29-50; Column 8 2-61; Figures 2A-2E, Elements 112-168);

- assigning (reserving, booking, etc.) the customer appointment (order, service request, etc.) to the available time slot (opening) in the shift schedule if customer appointment is within the time range (overlap, intersect, match, etc.) of the available time slot (opening, schedulable time block, etc.; i.e. assign the appointment to a shift schedule if the appointment coincides with an available time slot in the shift schedule; Abstract; Column 4, Lines 38-50; Column 8 2-61; Figures 2A-2E, Elements 112-168).

FIG. 2A

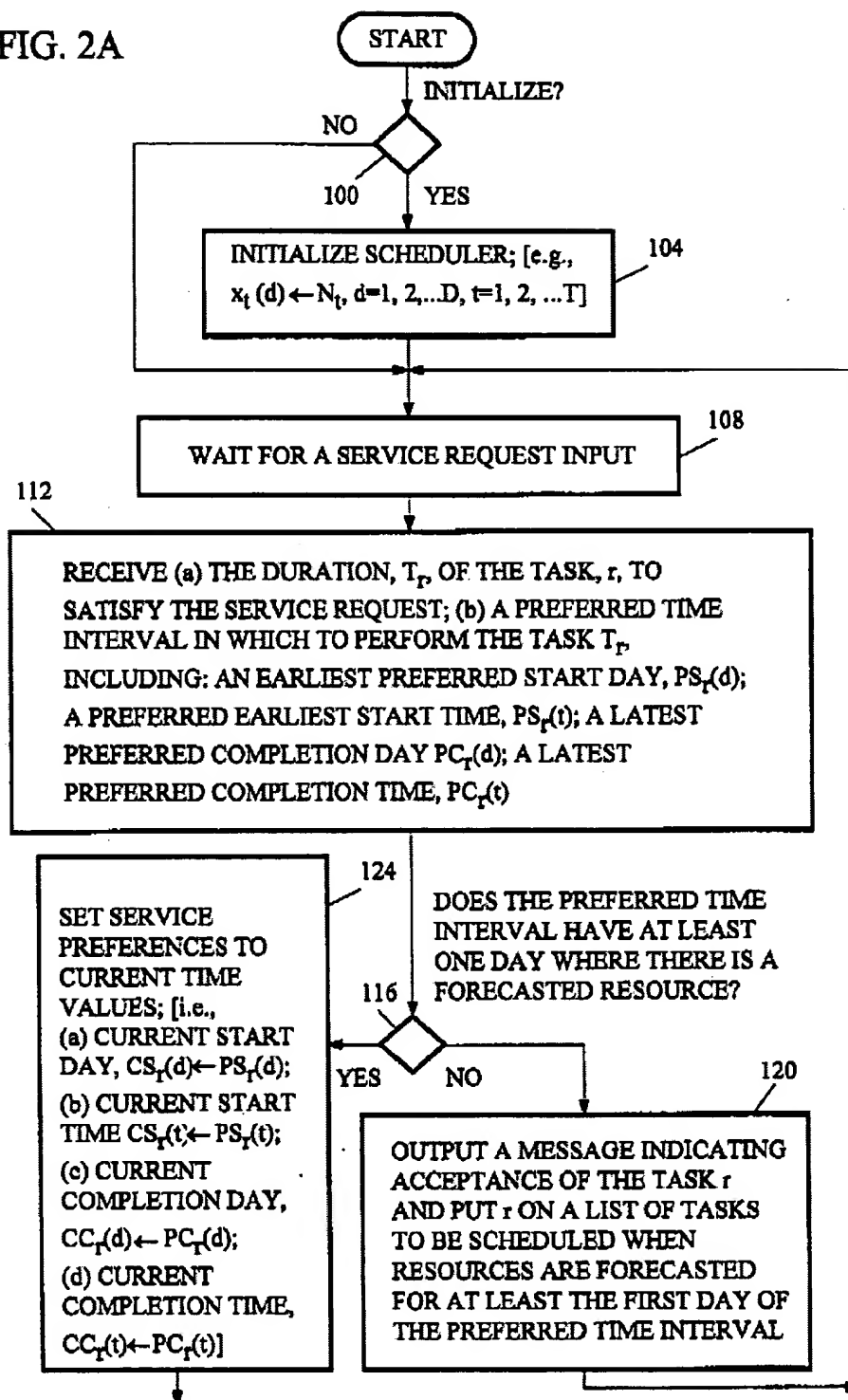
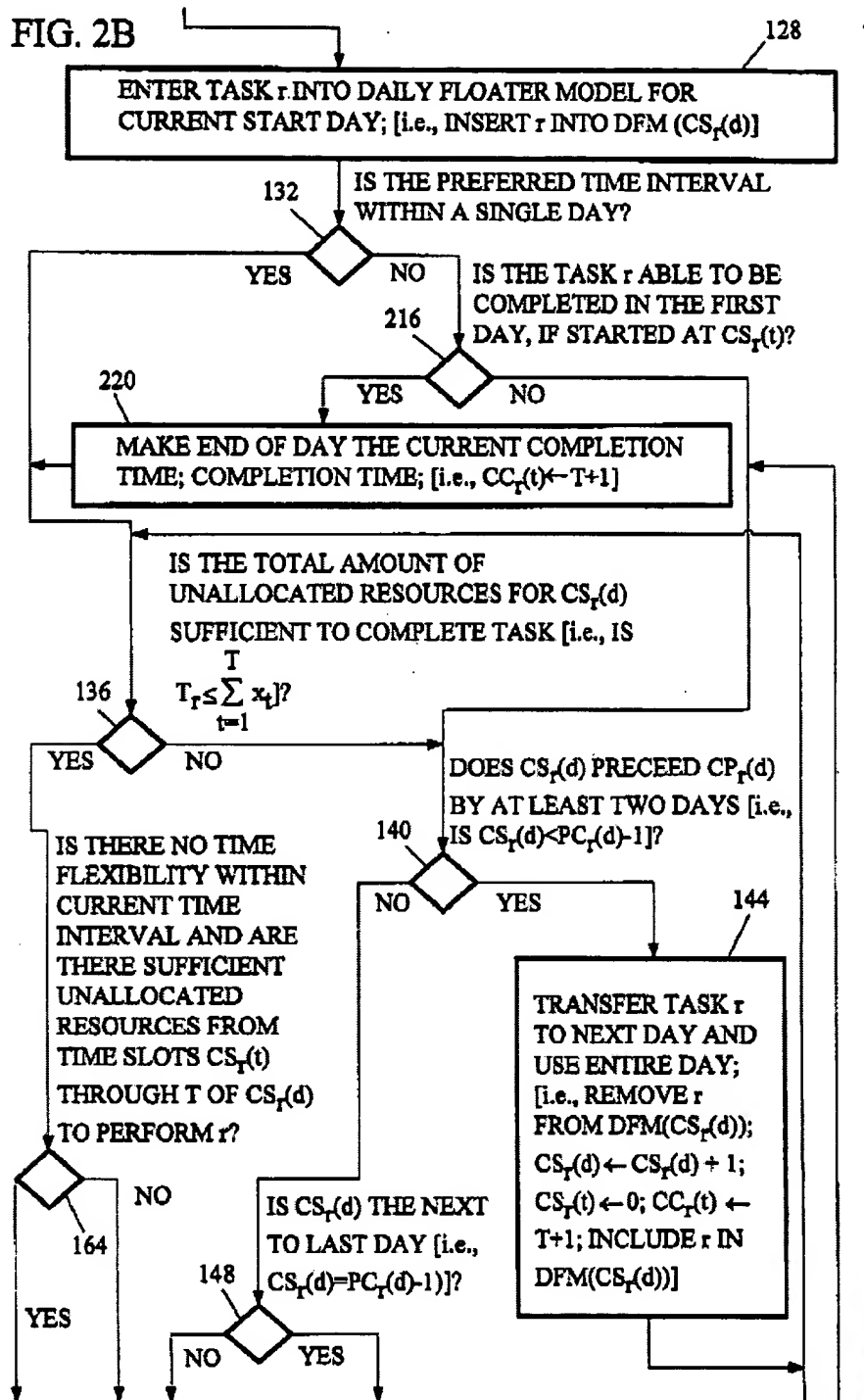
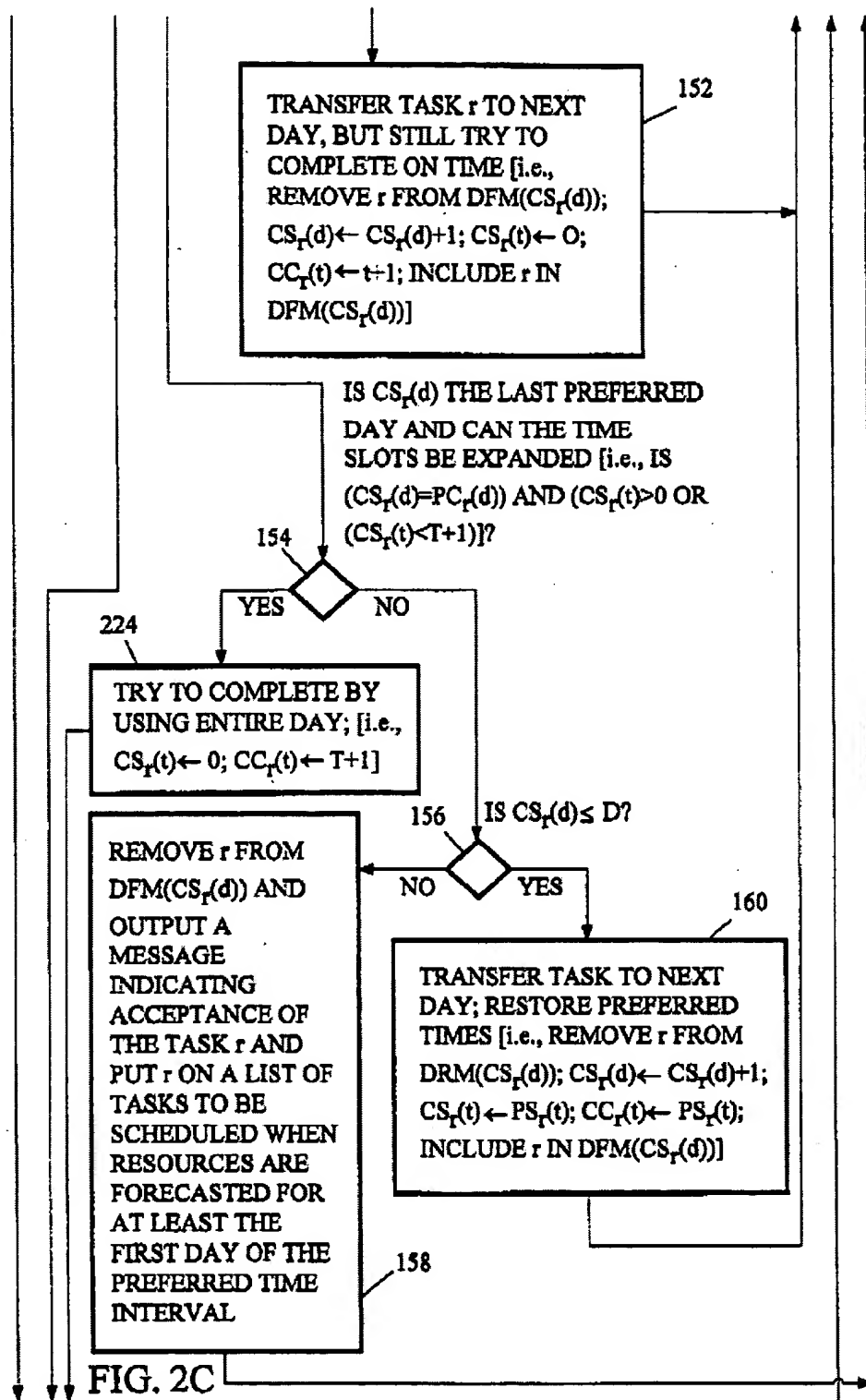
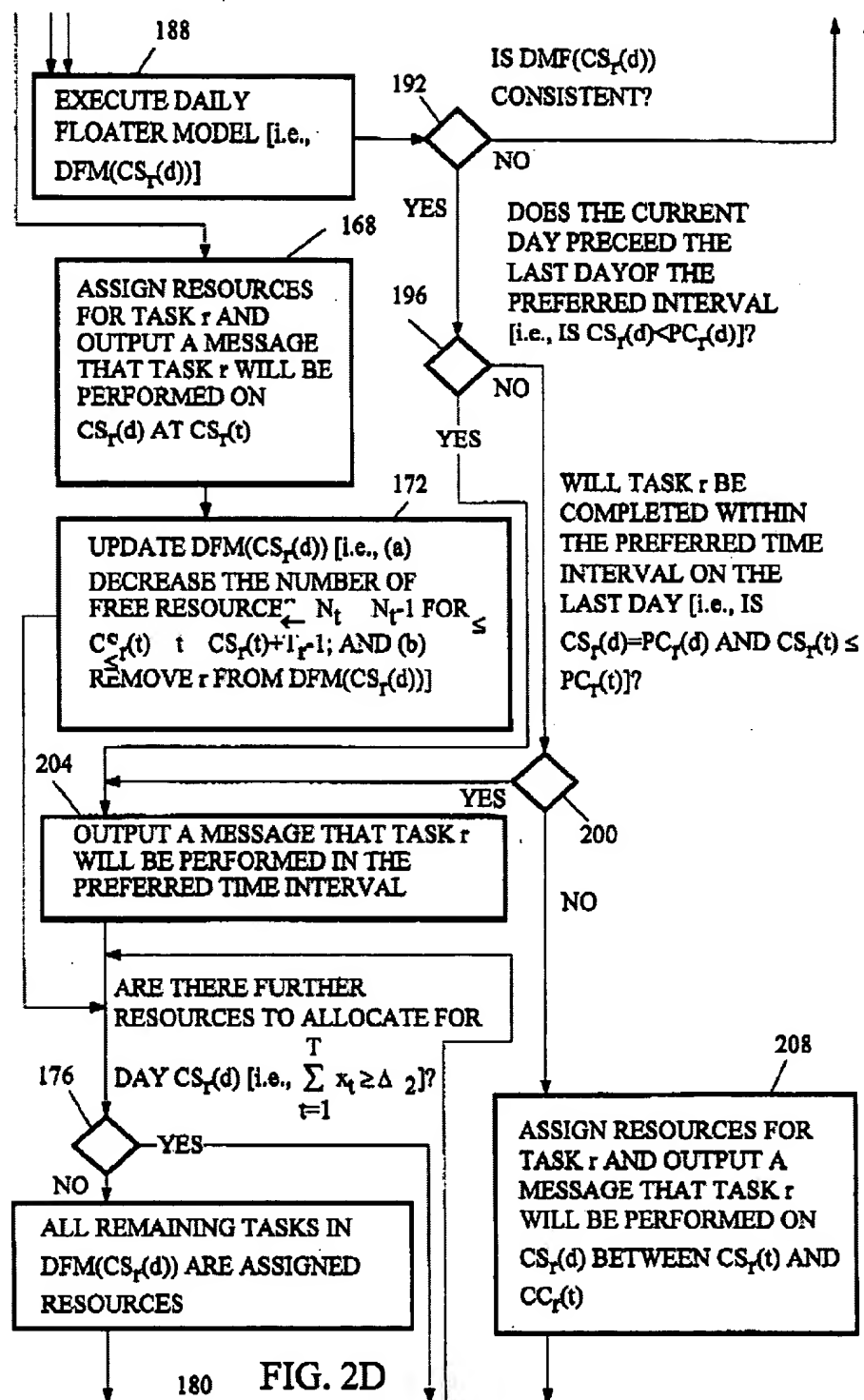


FIG. 2B







Regarding Claim 8 Babayev et al. teach a system and method for assigning an order (service request, appointment, delivery, etc.) to a shift schedule after a customer specifies an appointment time (window) in the schedule (calendar, "scheduling period") comprising:

- checking (looking, reviewing, searching, etc.) available (open, unscheduled, free, etc.) shift/schedule openings (time slots, appointments, blocks, etc.) for available shift/schedule time slots that overlap (match, map, intersect, coincide, etc.) the customer appointment window ("preferred time", appointment, reservation, etc.; Abstract; Column 1, Lines 44-47; Column 2, Lines 1-30; Column 4, Lines 29-50; Column 8 2-61; Figures 2A-2E, Elements 112-168);
- generating shift schedule openings (schedulable time blocks, free appointments, time slots, etc.) if the customer appointment does not overlap with the initial (existing) available shift schedule openings; wherein each of the newly generated shift schedules has an opening (available time slot, free time block, etc.) that overlaps (coincides, matches, maps, etc.) the customer appointment (Column 8, Lines 10-18; Column 12, Lines 1-24; Figures 2A-2E, Elements 120, 304); and
- assigning (reserving, booking, etc.) the customer appointment (order, service request, etc.) to the available time slot (opening) in the shift schedule if customer appointment overlaps (intersect, match, etc.) of the available time slot (opening, schedulable time block, etc.; i.e. assign the appointment to a shift schedule if the appointment coincides with an available time slot in the shift schedule; Abstract; Column 4, Lines 38-50; Column 8 2-61; Figures 2A-2E, Elements 112-168; Figure 3).

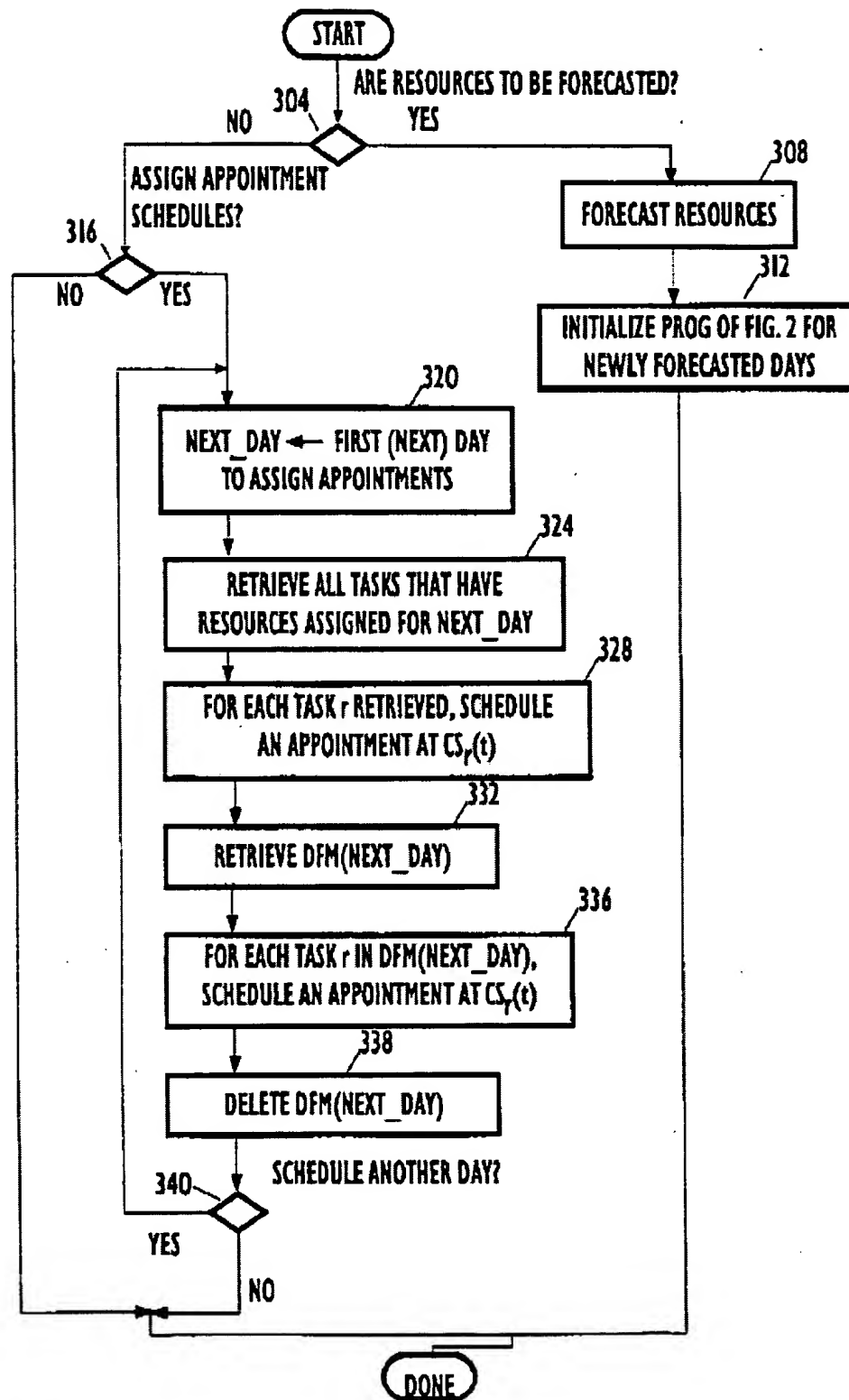


FIG. 3

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Babayev et al., U.S. Patent No. 5,615,121 as applied to claims 2 and 8 above and further in view of Edgar et al., U.S. Patent No. 5,848,395.

Regarding Claim 9 Babayev et al. teach that the customer order scheduling system and method takes into account a plurality of appointment/schedule factors/constraints including but not limited to the amount of time needed to work the order (duration of the task; Column 6, Lines 5-7; Column 8, Lines 5-6; Figure 2A, Element 112).

Babayev et al. does not expressly teach updating a tour (schedule) as claimed.

Edgar et al. teach updating a tour time of the shift (route, itinerary; Column 2, Lines 5-52), in an analogous art of customer order scheduling, for the purposes of taking into account travel times.

More specifically Edgar et al. teach that tour/schedule updating includes:

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- incrementing (determining, calculating, storing, accounting) the time required to travel to the order and from the order to a next order (travel times; Column 2, Lines 47-52; Column 3, Lines 11-16);
- incrementing a booked time for the shift by an amount of time needed for traveling to the order and time needed to work on the order ("taking into account travel times"; Column 2, Lines 47-52; Figure 5); and
- adjusting a load level (utilization) of the shift to account for the order (each region receives the same portion of free time; Column 2, Lines 53-61).

It would have been obvious to one skilled in the art at the time of the invention that the customer order scheduling system and method as taught by Babayev et al. would have benefited from updating a tour/schedule time to accommodate for travel times and load levels (utilization) in view of the teachings of Edgar et al.; the resultant system taking into account travel times between customer orders (Edgar et al.: Column 2, Lines 47-53).

Regarding Claim 10 Babayev et al. does not expressly teach aggregating at least two orders as claimed.

Edgar et al. teach the aggregation of at least two orders according to aggregation criteria ("defined geographic region"; Abstract; Column 1, Lines 20-25 and 59-65; Figure 2), in an analogous art of order scheduling for the purposes of optimizing the

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assignment of customer orders within a defined geographic region (Column 1, Lines 47-50; Column 2, Lines 47-65).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for scheduling customer orders as taught by Babyev et al. would have benefited from aggregating orders into geographic regions (aggregation criteria) in view of the teachings of Edgar et al.; the resultant system being capable of optimizing the customer order schedule on a region by region basis (Edgar et al.: Column 1, Lines 47-50; Column 2, Lines 47-65).

Regarding Claim 11 Babayev et al. teach that the method and system for scheduling customer orders further comprises shifting (defragmenting, optimizing, reorganizing, shifting, moving, shuffling, re-ordering, etc.) a set of free time and service time intervals blocks (available time) in a shift/schedule (Abstract; "...the optimization function provides values related to the amount of unassigned and unallocated service provide time.", Column 3, Lines 4-11) in order to optimize the service schedule (Column 2, Lines 33-4; i.e. shifting orders (services), as part of the optimization process, within the committed service time interval in order to accommodate new orders/optimize the schedule; "time flexibility"; Column 2, Lines 33-47; e.g. real-time optimization of the schedule, "...generates a new schedule on each new customer service request. That is, in those cases where a time interval is provided to previous customers for the relevant time period (e.g., a day) and a new service request is taken for the same time

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period, resources will actually be allocated within each of the various and previously specified time intervals...", Column 5, Lines 16-25).

Regarding Claim 12 Babayev et al. does not expressly teach that the method and system for scheduling customer orders utilizes a database as claimed.

Edgar et al. teach committing the shift (schedule, appointment, route, reservation) and a plurality of other information, which has been modified to fit the order, to a database (Column 1, Lines 53-58; Figure 1, Element 11), in an analogous art of order scheduling, for the purposes of storing the plurality of order/schedule information and/or providing the ability to offer customers a plurality of possible appointments (Column 2, Lines 20-23).

It would have been obvious to one skilled in the art at the time of the invention that the order scheduling system and method as taught by Babayev et al. would have benefited from storing the plurality of order/schedule information in view of the teachings of Edgar et al., the resultant system realizing the well known benefits of storing and accessing information in a database as well as provided customers a plurality of possible appointments (Edgar et al.: Column 2, Lines 20-23).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Kraisser et al., U.S. Patent No. 6,701,299, teach an order (delivery) scheduling system and method wherein customers specify an appointment window for the order and the system schedules/assigns and optimizes resources to meet the customer specified time frames.

- Florence, William T., U.S. Patent Publication No. 2002/0007299, teaches a system and method for assigning an order to an opening in a schedule after a customer

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has selected an appointment window in the schedule wherein the system determines the overlap between the customer appointment and schedule windows/openings.

- Indseth et al., U.S. Patent Publication No. 2002/0046073, teach a method and system for assigning orders to resources. Indseth et al. further teach the old and well known use of time windows in scheduling systems and methods.

- Scheduling Software Helps Webvan Meet 30-Minute Delivery Window, teaches the commercial availability and public use of an customer order scheduling system utilizing overlapping time windows.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott L. Jarrett whose telephone number is (571) 272-7033. The examiner can normally be reached on Monday-Friday, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hafiz Tariq can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


SJ

9/16/2005



SUSANNA M. DIAZ
PRIMARY EXAMINER

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